

Fig. 1

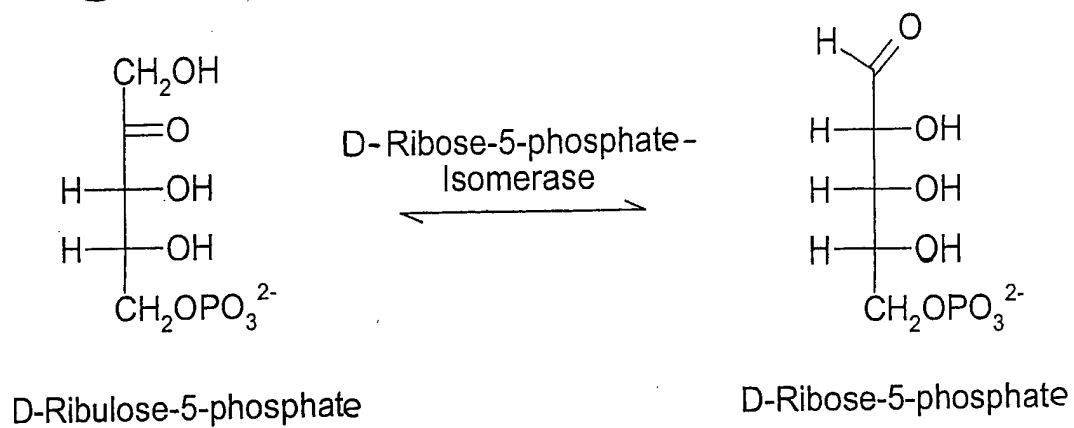


Fig. 2

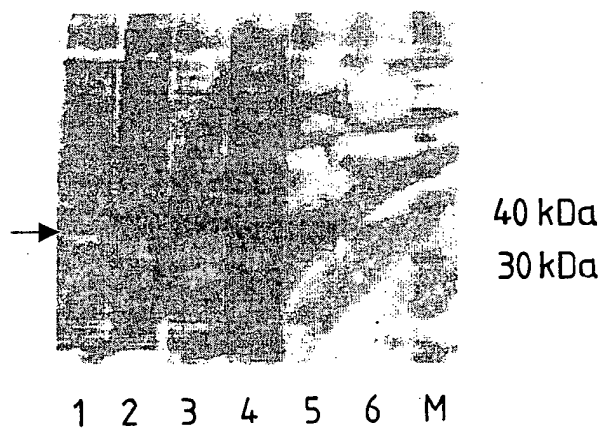


Fig. 3

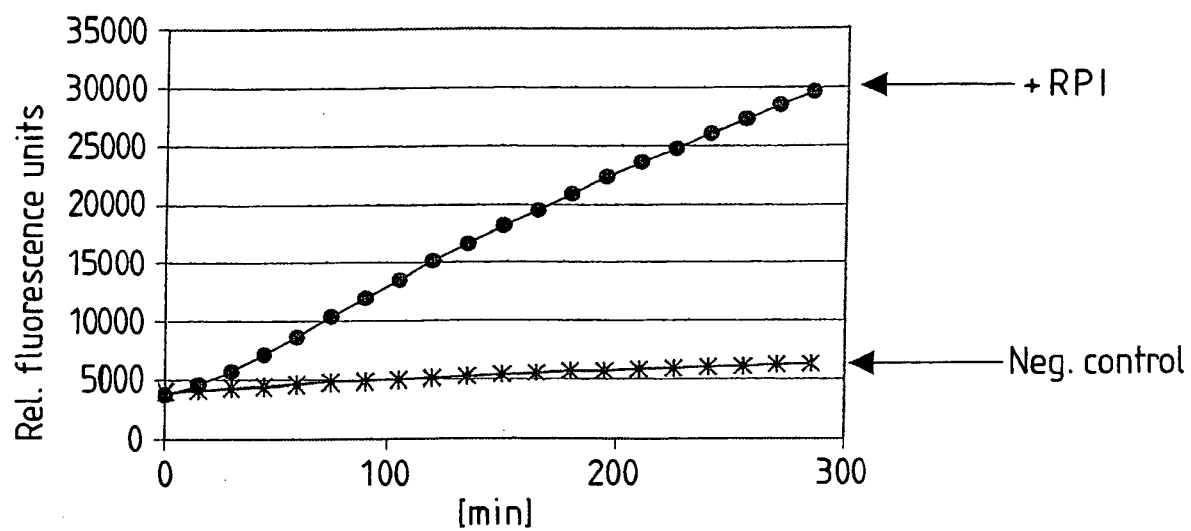


Fig. 4

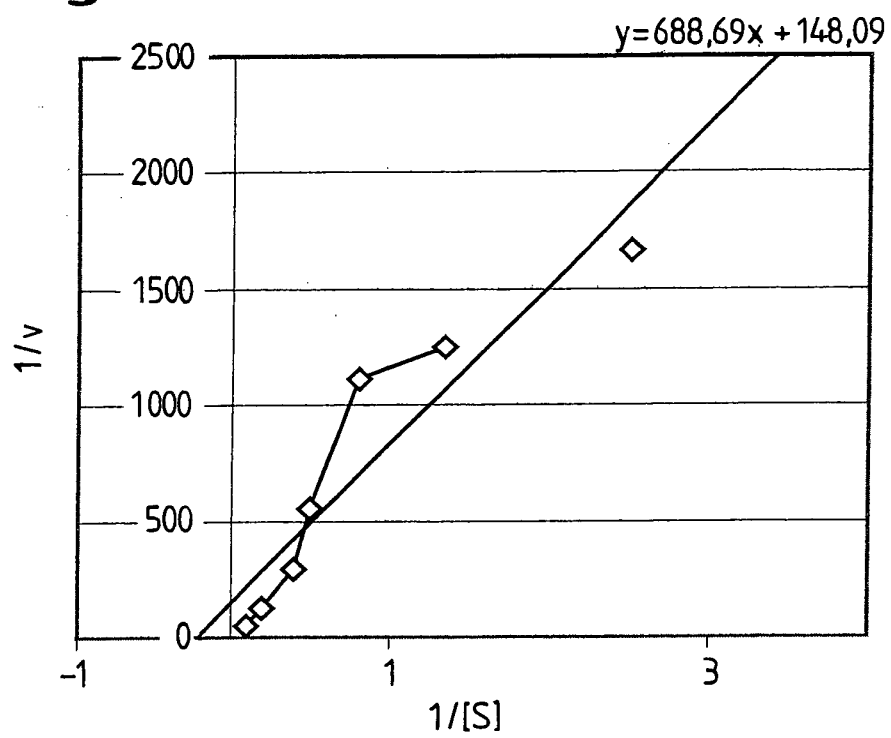


Fig. 5

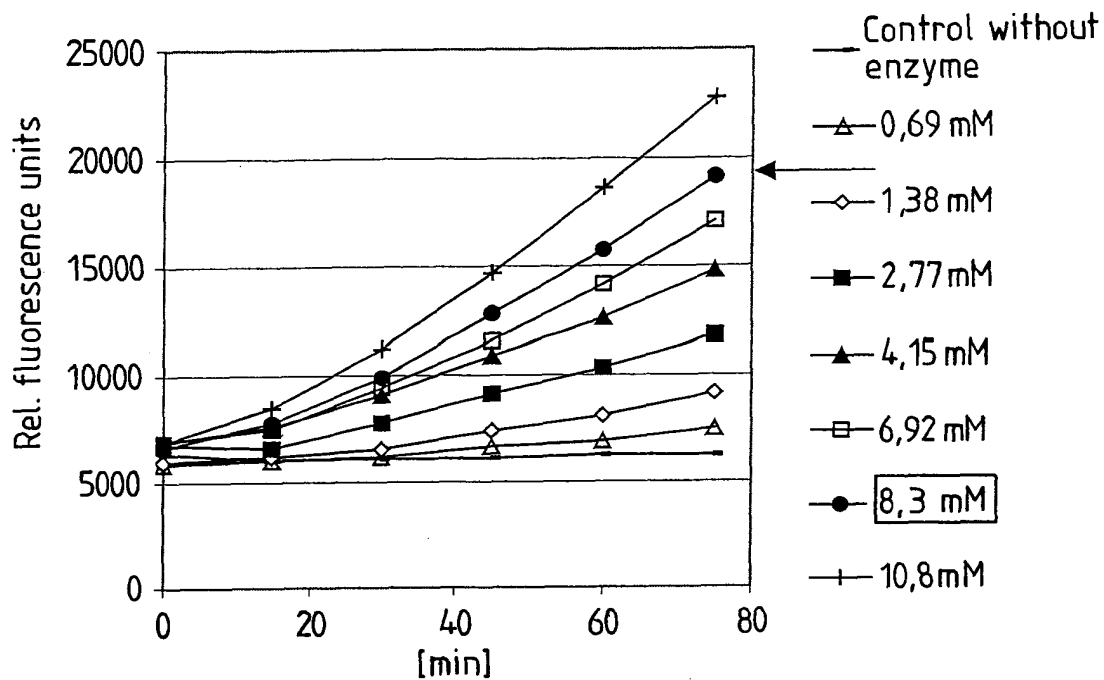


Fig. 6

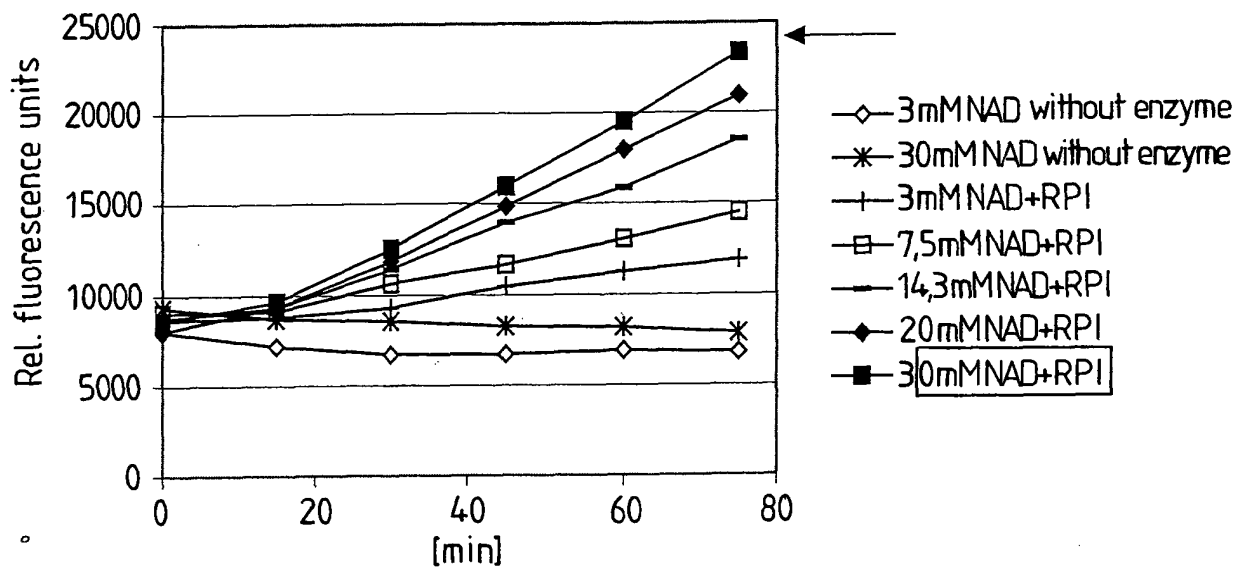


Fig. 7

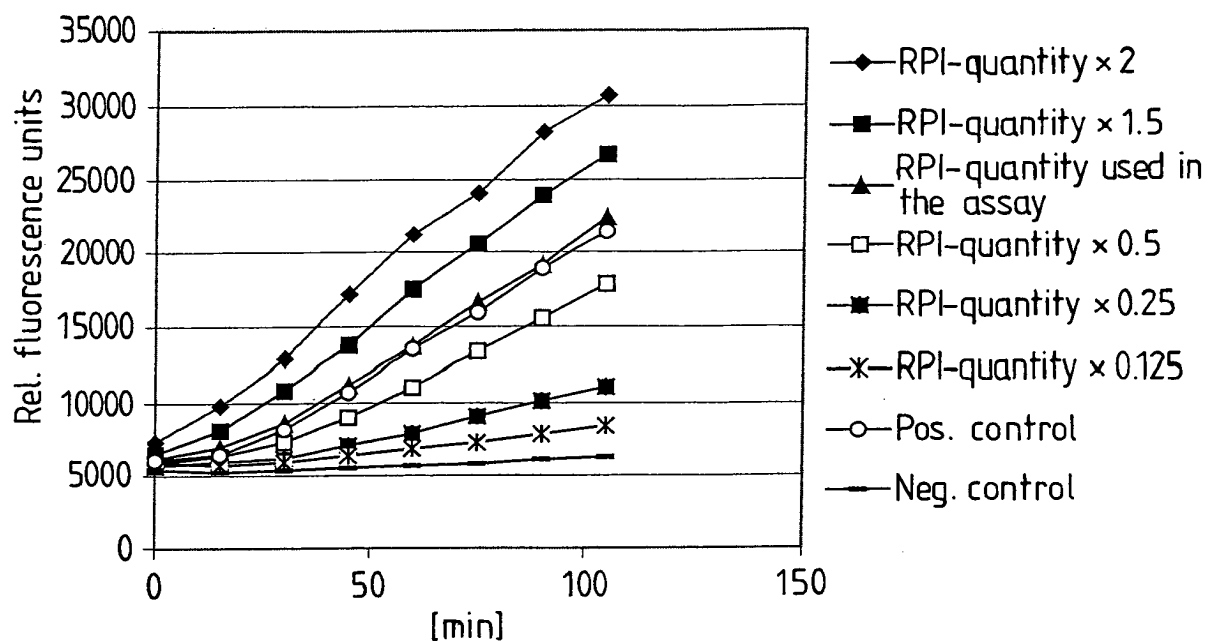


Fig. 8

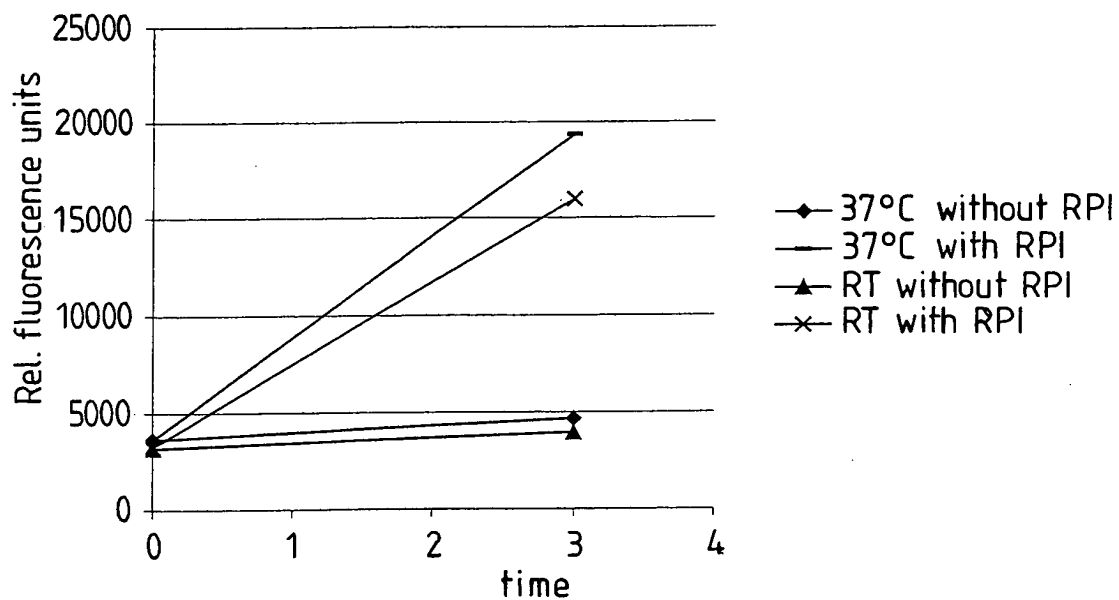


Fig. 9

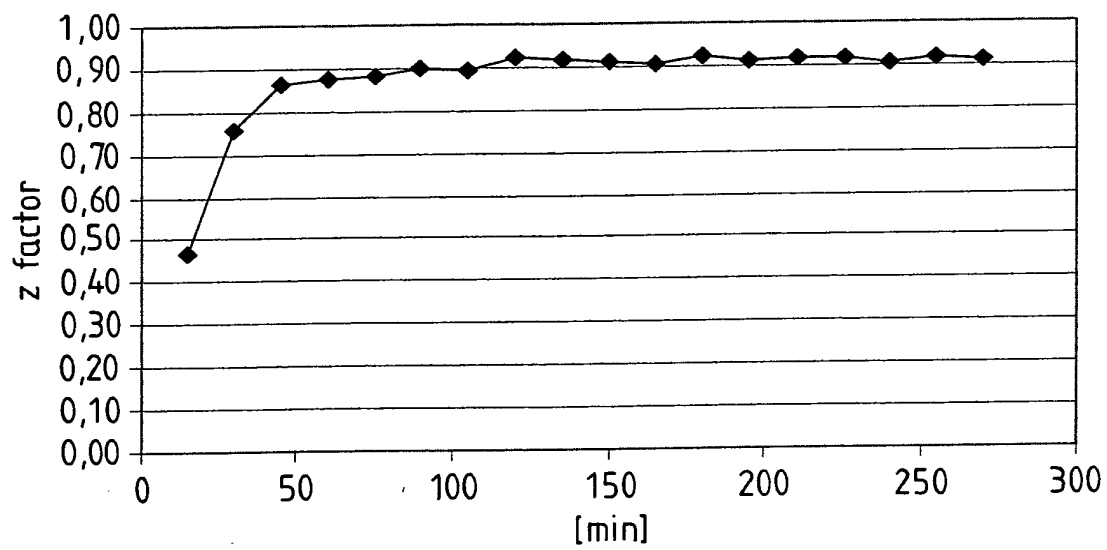


Fig. 10

U. maydis	.....MQSRL	LSLVSSHLS	KRCFIARSAA	LAPLLHPQR
LRLTCPRSFS				
S_pombe_144_12	.....	.....	.....	.....
.....				
S_c_RKI1	.....	.....	.....	.....
.....				
mouse_rpi	.....	.....	.....	.....
.....				
drosophila_RPI	MTYGHVACLL	QVFVENEINL	SPDQSCMNCC	GGCHDTRSSG
CYKAEFEFCG				
C_elegans_rpi	.....	.....	.....	.....
.....				
a_thaliana_hyp.RPI	.....	.....	.....	.....
.....				
E.coli_RPIA	.....	.....	.....	.....
.....				

U. maydis	SQQSGPRKMA	SSNATNSTSA	ASAANTNSSA	FKSAELAALS
GVEAAKRAAA				
S_pombe_144_12	.....	.....	MDSAEEKLD.	.....LS
PIELAKRLAC				
S_c_RKI1	.....	.....	MAAGVPKIDA	LE....SLGN
PLEDAKRAAA				
mouse_rpi	.....	.....	.....	.....MS
KAEAAKRLAS				
drosophila_RPI	QQAACKGRLY	KCNTIESEN	LSGAAATLHT	QIR..MMDDI
ALDAANKTAA				
C_elegans_rpi	.....	.....	.....MVTS	TGP..EAELA
PIEAAKRAAA				
a_thaliana_hyp.RPI	.....MAL	AYDPLFITS	D	KSLSAFDVAS
TQDELKRIAA				
E.coli_RPIA	.....	.....	.....	.....M
TQDELKAVG				

U. maydis	YAAVDNHVK.	PQHEIIGIGS	GSTVPYVVER	IAQ..QGPVAV
N...AKRWFV				

S_pombe_144_12	HMAVDENYP.	ENPKVIGIGS	GSTVVYVVER	L...LTKPG.
...VDSVVF				
S_c_RKI1	YRAVDENLKF	DDHKIIGIGS	GSTVVYVAER	IGQYLHDPKF
YEVASKFICI				
mouse_rpi	HTAVENHVKN	N..QVLIGIGS	GSTIVHAVQR	IAERVVKQEN.
....LDLICI				
drosophila_RPI	RTAVDQWVTE	DT.KILIGIGS	GSTVVYAVQR	IAERVWKEGE
...LTDLICV				
C_elegans_rpi	FACGEKYVQS	G..CRLGVGS	GSTVKYLVEY	LKQGFQNGS.
...LKDIICV				
a_thaliana_hyp.RPI	YKAVEFVES.	G..MVLGLGT	GSTAKHAVDR	IGELLRQGK.
...LENIVGI				
E.coli_RPIA	WAALQYVQP.	G..TIVGVGT	GSTAAHFIDA	LG...TMKG.
....QIEGAV				

U. maydis	PTGFQSRELI	INAGLRLGDV	DSFPSIDVTI	DGADEVDNAL
NCKKGGCAOH				
S_pombe_144_12	PTGFQSKQLI	VNGLRLGDP	DCYPNVDSF	DGADEVDDNL
QCKKGGCAOL				
S_c_RKI1	PTGFQSRNLI	LDNKLQLGSI	EQYPRIDIAF	DGADEVDENL
QLKKGGAOL				
mouse_rpi	PTSEQARQLI	LQYGLTSLDL	DQHPEIDLAI	DGADEVDAEL
NLKKGCGOL				
drosophila_RPI	PSSYQARHLI	LDYNLNLGDL	DRNPNIIDVAI	DGADEVDRHM
VLKKGCGOL				
C_elegans_rpi	PTISFLTQWL	IESGLPVSDL	DSHPELDVCI	DGADEVDGQF
TCKKGGGOL				
a_thaliana_hyp.RPI	PTSKKTQEQ	LSLGIPLSDL	DAHVIDLSI	DGADEVDPFL
NLVKGRGGSL				
E.coli_RPIA	SSSDASTEKL	KSLGIHVFDL	NEVDSLGIYV	DGADEINGHM
QMKKGGAAL				

U. maydis	LREKVLAEAA	NEFWVADYR	KNG.SQLGTK	WLQGVPIEVA
PFAY...AKV				
S_pombe_144_12	FOEKLIAFLA	KRLIVVADSR	KNS.HVLGEY	WKKGVPIEVM
PMAY...ASI				

S_c RKI1

PSSY...VRV

mouse_rpi

PMAY...VPV

drosophila_RPI

PMAY...VPI

C_elegans_rpi

PLAA...QPL

a_thaliana_hyp.RPI

PFCWKFTAEC

E.coli_RPIA

PMAR...SAV

U. maydis

E.AQMKDPSD

S_pombe_144_12

..GLIKNPKE

S_c RKI1

..GEISDPRK

mouse_rpi

..DRVHKWSE

drosophila_RPI

A.NREYDWDE

C_elegans_rpi

KNVSGRDWFA

a_thaliana_hyp.RPI

..EDMGDLGA

E.coli_RPIA

..MEILDPIA

U. maydis

G.....D

S_pombe_144_12

GEKHIIPAPV

S_c RKI1

FOEKLVTSA KTEIVVADSR KKSPKHLCKN WRQGVPIEIV

TOEIVAGYA SREIVVADFR KDS.KNIGDR WHKCTPIEVI

LOEKVVASCA KHEIVVADYT KNS.IRIGEO WCRGVPIEVA

AOEKIVQTAA KNEYVADYL KDS.KHIGDR YPN.VPIEVL

LRKMIEGAS KKEVIVVDDS KMV.KHIGGS KLA.LPVEIV

TREKIIASVA EKEICIAS KQV.DILG... .KFPLEVEVI

LQNLKK.MGS DKAIVLRMG.K AKAGPVVTDN GNECTDAPFP

LPQLVE.LGA IEPKLRMGAP GKAGPVVTDN GNEIIDAHF.

KNDLLEQLHA EKVDIRQGS AKAGPVVTDN NNFIIDADF.

SRAVAQKFGG E.VELRMA.V NKAGPVVTDN GNEILDWKF.

KLHIEALFGG E.ASLRMA.K VKAGPIVTDN GNEILDWKF

LRSIPRAEGG S.COLRQA.V KRCGPVTDN GNEIIDWQFE

LRSLLEGYGC E.ANLRLG.. EKGAFAVTDN GNYIVDMHVE

ARQLVK.LGG R.PEYRQG... ..VVTDN GNVILDVHG.

LLKRIKLLTG VLEVGLFCN. ICKSAVFGND DGTITIKTAA

LFKIKLLVG VLEVGLFCD. MISAVYFGSK DGSVTVKKAS

LHREIKLLVG VVETGLFID. NASKAVFGNS DGSVEVTEK.

mouse_rpi	VNTAIKMTPG	VWDTGLEIN.	MAERVYEGMQ	DGSVNVREKP
F.....				
drosophila_RPI	VNRAITLIPG	VLETGLEVN.	MAHKCMYGM	NGSVKVQNK.
.....				
C_elegans_rpi	IQORLANTPG	IVETGLEFIG.	CVDVFFAYS	DGSVKEIVNS
KKH.....				
a_thaliana_hyp.RPI	VSDAILRLPG	VVEHGMELD.	MASTVIIAGE	LG.VKIKNKH
.....				
E.coli_RPIA	MENAINAIPG	VWTVGLEFANR	GADVALIGTP	DG.VKTIVK.
.....				

U. maydis	VQEGVHFDVS	KAPATA....
S_pombe_144_12	TAAANEVDAK	VAETNAKPLN
S_c_RKI1	.....	.....
mouse_rpi	.....	.....
drosophila_RPI	.....	.....
C_elegans_rpi	.....	.....
a_thaliana_hyp.RPI	.....	.....
E.coli_RPIA	.....	.....

Fig. 11

U_m_RPI1	MQSRLLSLVS	SHLVSKRCFI	ARSAALAPLL	LHPQRLRLTC
PRSFSSQQSG				
SPAC144_12	.....	.....	.....	.....
.....				
SC_RKI1	.....	.....	.....	.....
.....				
CRYNE_001022	.....	.....	.....	.....
.....				
CANAL_Contig6-2195	.....	.....	.....	.....
.....				
embl.CNS06G7H	.....	.....	.....	.....
.....				
NEUCR_contig	.....	.....	.....	.....
.....				
embl.CNS06MQK	.....	.....	.....	.....
.....				
embl.CNS06EST	.....	.....	.....	.....
.....				
embl.CNS0766C	.....	.....	.....	.....
.....				
embl.CNS06ZNB	.....	.....	.....	.....
.....				
embl.CNS06ZLP	.....	.....	.....	.....
.....				
embl.KLAJ9603	.....	.....	.....	.....
.....				
U_m_RPI1	PRKMASSNAT	NSTSAASAAN	TNSSAFKSAE	LAALSGVEAA
KRAAAYAAVD				
SPAC144_12	.....	.....	....MDSA EK	KLDLSPIELA
KRLACHMAVD				
SC_RKI1	.....	.....M	AAGVPKIDAL	ESLGNPLEDA
KRAAAYRAVD				
CRYNE_001022	.....	.....	.....	.....
.....				
CANAL_Contig6-2195	.....	.....	.....	MSSTSKVESA
KKLAAYKAVD				
embl.CNS06G7H	.....	.....	.....	.....

.....
embl.KLAJ9603
.....

U_m_RPI1

IKGGGACHLR

SPAC144_12

IKGGGACLFQ

SC_RKI1

IKGGGACLFQ

CRYNE_001022

IKGGGACQLR

CANAL_Contig6-2195

IKGGGACLFQ

embl.CNS06G7H

IKGGGACLFQ

NEUCR_contig

IKGGGACLLQ

embl.CNS06MQK

IKGGGACLFQ

embl.CNS06EST

IKGGGGOLFQ

embl.CNS0766C

IKGG.....Q

embl.CNS06ZNB

IKGGGACLFQ

embl.CNS06ZLP

IKGXGAXXLQ

embl.KLAJ9603

.....VQ

.....
SRELINAGL RLGDV.DSFP ..SIDVTIDG ADEVDNAINC

SKQLTVNNGL RLQDP.DCYP ..NVDVSFDG ADEVDDNIQC

SRNLILDNKL QLGSI.EQYP ..RIDIAFDG ADEVDENIQL

SKELIVKAGL TLGDV.DQYA ..RIDVTIDG ADEVDENIINS

SKQLIIDNGL RLGTI.EQYP ..DIDIAFDG ADEVDPQINL

SRNLILDNKL QLGSI.EQYP ..RIDIAFDG ADEVDENIQL

SRDLTQAAGF RLGYSDDLSP GHALDVCFDG ADEVDPAINL

.....I.DQYP ..NVDIAFDG ADEVDBANIQL

SKQLIMDNGL TYAIL.EQHP ..HIDIAFDG ADEIDCNIDL

.RQLIIDNWX RLGST.EEYP ..EIDIAFDG ADEIDSNLGL

.....YH ..EIDIAFDG ADEVDENIQL

.....EQYP ..EIDIAFDG ADEVDENIQL

.....

U_m_RPI1

SPAC144_12

SC_RKI1

CRYNE_001022

EKVLAEAAANE FVWVADYRKN G.SQLGT...

EKLIAFLAKR LVIIVADSRKN S.HVLGEY...

EKLVSTSAKT FVWVADSRKK SPKHLGKN...

EKVLAEAADT WIVADYRKN S.EVLGTSVR AFLSCLEDQT

NAMSLFSLYL				
CANAL_Contig6-2195	EKLVAASAKK	FVWVADYRKK	SDK.LGQL..	.....
.....				
embl.CNS06G7H	EKLVSTSAKT	FIIVADSRKK	SPKHLGKN..	.....
.....				
NEUCR_contig	EKL VATAARK	FVCVADSRKI	S.NHLGTQ..	.....
.....				
embl.CNS06MQK	EKL VSTSTDK	FIIVADSRKK	SPQYLGTS..	.....
.....				
embl.CNS06EST	EKL ISTSAKI	FVWVADTSKK	SPRRLGSH..	.....
.....				
embl.CNS0766C	EKLVAACSKQ	LWVWADYRKD	T.GVLGKG..	.....
.....				
embl.CNS06ZNB	EKL VSTSAKK	FIIVADSRKR	SPKHLGTN..	.....
.....				
embl.CNS06ZLP	DKLVXTXAKK	FIIVADSRKR	XXKHLGTN..	.....
.....				
embl.KLAJ9603	EKL VSTSAKK	FIIVADSRKK	SPKYLGTN..	.....
.....				
U_m_RPI1	.....	.....KWLQGVPIEVAPFAY	AKVLQN....	
.....				
SPAC144_12	.....	.....WKKGVPIEVMPFAY	ASILPQ....	
.....				
SC_RKI1	.....	.....WRQGVPIEIVPSSY	VRVKND....	
.....				
CRYNE_001022	FIRFPMTPIE	LIASPKWTKG IPLEVVPFAY	AKVLTN....	
.....				
CANAL_Contig6-2195	.....	.....WRQGVPIEIVPNSY	SKIIQE....	
.....				
embl.CNS06G7H	.....	.....WRQGVPIEIVPSAY	VRVKND....	
.....				
NEUCR_contig	.....	.....WKKGVPIEVFPFAY	PQVLGE....	
.....				
embl.CNS06MQK	.....	.....WKKGVPIEIVPSSY	VRVSKD....	
.....				
embl.CNS06EST	.....	.....WVQGVPIEVPAAY	NRVQDD....	
.....				
embl.CNS0766C	.....	.....WRKGVPIEVPAAY	TKVSLD....	

```

.....
embl.CNS06ZNB      .....WKRG VPTEVVPSSV VHVLT.....
.....
embl.CNS06ZLP      .....WKRG VPTEVVPSSV DRAVAR.....
KRGFWLRITA
embl.KLAJ9603      .....WKKG VPTEVVPSSV VRLSD.....
.....

```

```

U_m_RPI1           .....
.....
SPAC144_12         .....
.....
SC_RKI1            .....
.....
CRYNE_001022       .....
.....
CANAL_Contig6-2195 .....
.....
embl.CNS06G7H      .....
.....
NEUCR_contig       .....
.....
embl.CNS06MQK       .....
.....
embl.CNS06EST       .....
.....
embl.CNS0766C       .....
.....
embl.CNS06ZNB      .....
.....
embl.CNS06ZLP      TSSLTLTFGE ..IADPRKLH QDIKMLVGVV ETGLFIDNAE
KAYFGSPDGS
embl.KLAJ9603      .....
.....

```

```

U_m_RPI1           .....L KKMGS..... ...DKAVLRM
GKAKAG..PV
SPAC144_12         .....L VELGAI..... ...EPKLRMG

```

APGKAG..PV			
SC RKI1	.....LL	EQLHAE....	...KVDIRQG
CSAKAG..PV			
CRYNE 001022	.....L	AHMGSPHVLP	NGQPGLSLRM
GKMKAG..PV			
CANAL Contig6-2195	.....LS	KKLGA....	...NVDLRQG
GKAKAG..PI			
embl.CNS06G7H	.....LL	EQLHAD....	...KVDIRQG
GSAGAG..PV			
NEUCR contig	.....L	ERLGRL....	...SAQVRSG
LPGKAG..AC			
embl.CNS06MQK	.....LR	EKLGSR....	...KAEVRQG
CSAKAG..PV			
embl.CNS06EST	.....LL	NLLGA....	...TATLRQG
GKVKMG..PV			
embl.CNS0766C	.....L	VKLGG.....	...KPVVRSG
LPAKAG..PV			
embl.CNS06ZNB	.....LK	DRLHCK....	...SAIVRQG
CSAKGGPCPV			
embl.CNS06ZLP	VELQLKCCPV	PMWHVLTALK	DRLHCK....
CSAKAG..PV			
embl.KLAJ9603	.....LK	NKLNCK....	...SAMVRQG
.....			

U m RPI1	VTDNGNECID	APPEAQMKD	PS.....	....DLKR
IKLITGVLEV				
SPAC144 12	VTDNGNEIID	AHFGLIK..N	PKE.....	....LFAK
IKLIVGVWEV				
SC RKI1	VTDNNEIID	ADGE..ISD	PRK.....	....LHRE
IKLIVGVWET				
CRYNE 001022	VSDNGNEIID	APFAELMRQ	PEE.....	....VELHK
IKMITGVWEV				
CANAL Contig6-2195	ITDNNNELLD	ADGEIEIDN	VGK.....	....LHEQ
IKLIVGVWET				
embl.CNS06G7H	VTDNSNEIID	ADGE..IKD	PRT.....	....LHRD
IKLIVGVWET				
NEUCR contig	VTDNGLRIVD	AVEKPLLTEL	PEGKQEGEEG	VWTVDGLARR
LELPGVAEH				
embl.CNS06MQK	VTDNSNEIID	ADGEIQ..D	PKK.....	....LHQD

IKMLVGVET
embl.CNS06EST
IKALVGVET
embl.CNS0766C
IKALVGVET
embl.CNS06ZNB
IKMLVGVET
embl.CNS06ZLP
.....
embl.KLAJ9603
.....

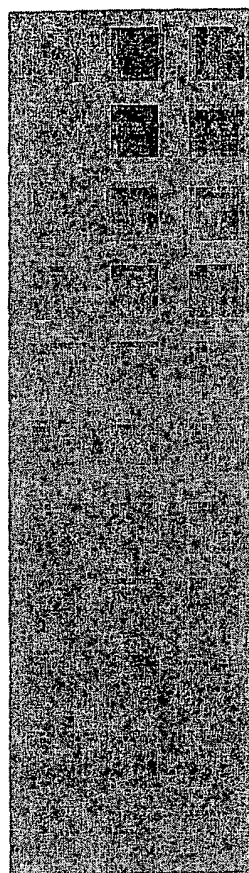
VTDNNNIILD THFGD..IDD PKK.....LHDN
VTDNGNFIID CDEGEIPPAQ VAE.....LNAK
VTDNCNEIID ADFGE..IAD XRK.....LHQD
VTDNCNEIID ADF.....
.....
.....

U_m_RPI1
QEGVHFDVSK
SPAC144_12
HIIPAPVTAA
SC_RKI1
.....
CRYNE_001022
.....
CANAL_Contig6-2195
.....
embl.CNS06G7H
.....
NEUCR_contig
.....
embl.CNS06MQK
.....
embl.CNS06EST
.....
embl.CNS0766C
.....
embl.CNS06ZNB
.....
embl.CNS06ZLP
.....
embl.KLAJ9603
.....

GLFCNI....CK SAYFCNDGDT ITIKTAAGDV
GLFCDM....IS AVYFGSKDGS VTVKKASGEK
GLFIDN....AS KAYFGNSDGS VEVTEK....
GLFCGM....AK AAYFCNE...
GLFTNM....AN KAYFGEDGS VSV.....
GLFIDN....AS KAYFGNSDGT
GLFYGKSGLE VESGGAQKPV AAYFGMEDGS VMVQT....
GLFIDN....AC KAYFGNADGT VEV.....
GLFIGN....AA KAYLGSPDGD VLI.....
GLFVSL....AS KAYIGNADGT ITKKT....
GLFIDN....AE KAYFGSPDGS VELQ.....
.....
.....

U_m_RPI1	APATA.....
SPAC144_12	ANEVDAKVAE TNAKPLN
SC_RKI1	.....
CRYNE_001022	.....
CANAL_Contig6-2195	.....
embl.CNS06G7H	.....
NEUCR_contig	.....
embl.CNS06MQK	.....
embl.CNS06EST	.....
embl.CNS0766C	.....
embl.CNS06ZNB	.....
embl.CNS06ZLP	.....
embl.KLAJ9603	.....

Fig. 12



← 20 mM Ribose-5-phosphate

Fig. 13

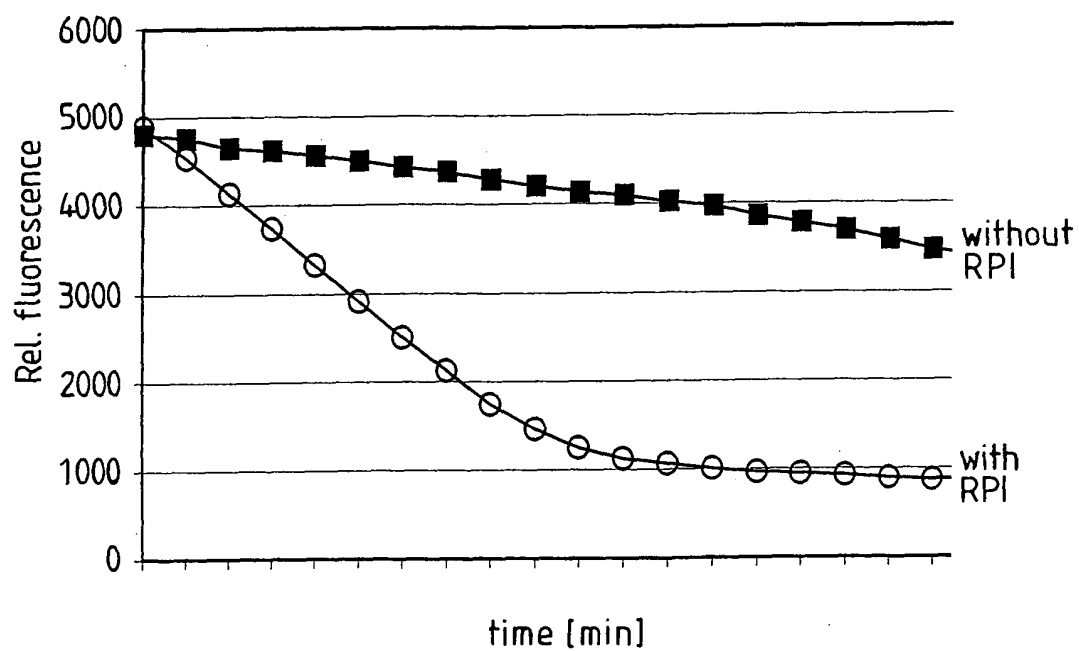


Fig. 14

